1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291
342
357
415
516

SEVENTEENTH ANNUAL REPORT PL. X

BUREAU OF AMERICAN ETHNOLOGY

TYPICAL SERI HOUSE ON THE FRONTIER

[FACING P. 117]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

The painted designs vary among different individuals, but are fairly persistent for each. The prevailing design at Costa Rica in 1893 was that of the aged matron known as Juana Maria (plate XVIII), with variations in detail such as that exhibited by her unmarried daughter Candelaria (the Seri belle shown in plate XXIV); next in frequency were the designs, in white and red, exhibited by the matrons portrayed in plates XX and XXII. Other designs observed are indicated in plate XXVI. The variations in individual designs are apparently due either to varying care in the application of the paint or to the degree of obliteration by wear—e. g., the withered Juana Maria sometimes put on her design askew and was negligent of details, while the blooming Candelaria greatly elaborated the details of the pattern and carefully perfected the symmetry of the whole when preparing for her full dress sitting before the camera (plate XXIV), so that her design was then gorgeous by contrast with the nearly obliterated blur of a half-hour before. The designs are renewed every few days, especially for ceremonious occasions, and hence are practically permanent. 302

When grouped in relation to their wearers, the designs are found to exhibit family connection. Thus, Juana Maria's design is repeated, with greater elaboration of detail and with a pair of supplementary marks, in that of her daughter Candelaria; the winged symbol of the Seri matron portrayed in plate XX is repeated with minor variations in that of her daughter, the Seri maiden pictured in plate XXV; while the symbols of the mother and infant daughter depicted in plate XV are essentially alike. It is noticeable, too, that in the nearly spontaneous arrangement of individuals in the group shown in plate XIII there is a tendency toward subgrouping by symbols; and it was constantly observed that the family groups gathered about particular jacales (such as that shown in plate XIV) displayed corresponding designs, though there were frequent visitors from neighboring jacales bearing other designs. Briefly, all the observed facts, as well as the supplementary information gained by inquiry, indicate that the designs are hereditary in the female line, but are susceptible of slight modification both in elaborateness of detail and in the addition of minor supplementary features. 302 424 593

The principal apparatus and materials used in the face-painting are illustrated in plate XXVII. The chief pigments are ocher, gypsum, and the rare mineral dumortierite; the ocher yields various shades of red, ranging from pink to brown; the gypsum affords the white used in most of the designs; while the dumortierite is the source of the slightly varying tints of blue. So far as was observed, the pigments are not blended by mixing, though there is some blending due to overlapping in application. The ocher is commonly extracted and transported as lumps of ocherous clay or ocherous gypsum (plate XXVII, figures 1 and 5), though it is sometimes reduced to powder and transported in bits of skin or rag, or in cylinders of cane (plate XXVII, figures 3 and 4); and it is 386 [317] [415]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Mashém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-hedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13.—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 362), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 294, 295).

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

life of the tribe rotates: since the clans never reside and rarely camp nearer than 3 to 15 miles from the aguaje, a large part of the water consumed must be transported great distances in these vessels; since the region is one of extreme aridity, the lives of small parties often depend on the integrity of the olla and on the care with which the fragile vessel is protected from shock or overturning; and hence the utensil must occupy a large if not a dominant place in everyday thought—indeed, the fact that it does so is attested by constant custom and also by its employment as the most conspicuous among

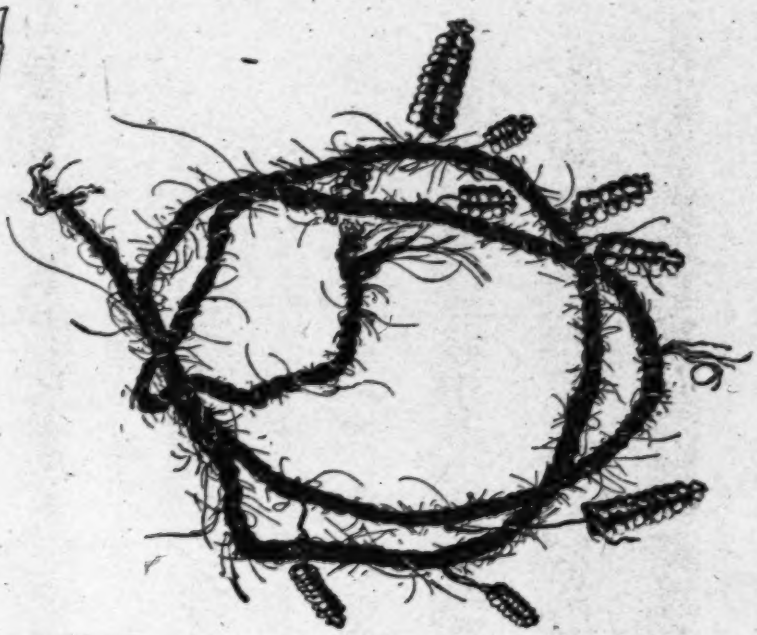

FIG. 14—Rattlesnake necklace.

the mortuary sacrifices. Thus, the relation of the Seri olla to its makers and users is parallel with that of the ever-present earthen pot to the Pueblo people, or that of the cooking basket to the acorn-eaters of California, save that its relative importance is enhanced by the fewness of activital lines and motives in Seri life. Moreover, this most characteristic utensil is established and hallowed in Seri thought by immemorial associations: its sherds are sown over the hundred thousand square miles of ancient "despoblado" from Tiburon to Caborca, Magdalena, Rio Opodepe, and Cerro Prieto, and are scattered through the 90 feet of shells forming Punta Antigualla (perhaps the oldest shell mound of America); and all the sherds from the range

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and the shell-strata are so like and so different from any other fictile ware as to be distinguished at a glance. Hence it would seem manifest that the Seri olla must constitute a normal nucleus for the Seri esthetic; yet even here the field is practically barren, as is shown by the study of a score of usable and mortuary specimens and of thousands of sherds. The most ornate specimen seen is that depicted in plate XXXII. Its form, like that of the balsa, is a mechanical equation of forces and materials; its body-color is that of the clay, blotched and blackened irregularly by the smoke of the firing; and its decoration is limited to 17 faint lines or bands radiating downward from the ill-shaped neck. The radial bands were evidently drawn by a finger dipped in clayey water after the vessel was otherwise finished for the firing; they are irregular in placement, width, length, and direction; they generally run in pairs, two straight lines alternating with two zigzag lines, though the circuit is completed by two zigzags drawn wide apart and separated by a single straight line. The meaning of the device (if meaning there be) was not directly ascertained; but it is suggestive that its maker and owner was the mother of the youthful warrior from whom the rattlesnake necklace was obtained (her face-symbol is that shown in the lower left figure of plate XXVI), and that the vessel was surrendered more reluctantly than any other article obtained from the tribe.

Another utensil of some importance to the tribe is a basket of the type illustrated in figure 24. It is manufactured with much skill and is used for various domestic purposes, being practically water-tight and unbreakable, and materially lighter than even the unparalleledly light fictile ware of the Seri. In form and size and weave the half dozen examples seen correspond with widespread southwestern types; yet it is noteworthy that while otherwise similar baskets are habitually decorated by other basket-making tribes, the Seri specimens were absolutely devoid of decorative devices.

Practically the only remaining artifacts available for decoration are those connected with archery; and it suffices to say that while the bows are skilfully made and the arrows constructed with exceeding pains, not a single specimen seen showed the slightest trace of symbolism or of nonutilitarian motive.

Summarily, the Seri are characterized by extreme esthetic poverty. This has been noted by the early missionaries and by the few other travelers who have approached their haunts, as well as by the vaqueros on the Encinas and Serna and other ranchos bordering their range, who know them as "los pobrecitos". All observers have been struck with their destitution and squalor; yet when the impressions are particularized they are seen to denote absence of the poor luxuries, rather than the bare necessities, of primitive life. The people are pathetically poor in the industrial sense; their equipment in artifacts—implements, weapons, utensils, habitations, apparel—is meager almost, if not quite, beyond parallel in America; yet their esthetic equipment, practically

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extensive rancherías near Punta Narragansett measure 10 miles by trail from the same aguaje; the half dozen jacales about Campo Navidad are separated by some 18 miles of stony and hilly pathway from the alternative watering places of Tinaja Anita and Arroyo Carrizal;[1] and the huts crowning the great shell-heap of Punta Antigualla—one of the most striking records of immemorial occupancy in America—are nearly or quite 10 miles by trail from Pozo Escalante, and still further from Aguaje Parilla, the nearest sources of potable water. These are but typical instances; and while there are ruined huts (evidently regarded as temporales) near the dead waters of Barranca Salina and Pozo Escalante, they tell the tribal policy of locating habitations in places surprisingly remote from running water. Like other desert folk, the Seri have learned to economize in water-carrying by swigging incredible quantities on their occasional visits to the aguajes; it is probable, too, that their systems are inured, somewhat as are those of the desert animals that survive deprivation of water for days or months, to prolonged abstinence from liquid food; yet it seems safe to assume that at least half of the water required in their vital economy (say 2 or 3 pounds apiece daily, on an average) is consumed after transportation over distances ordinarily ranging from 4 to 12 miles. Under these conditions the Seri have naturally produced a highly developed water industry; they are essentially and primarily water-carriers, and all their other industries are subordinated to this function.

Concordantly with their customs, the Seri have a highly differentiated aquarian device in the form of a distinctive type of olla, which is remarkable for the thinness and fragility of the ware, i. e., for largeness of capacity in proportion to weight. Representative specimens are illustrated in plates XXXII and XXXIII (the former painted, as already described). The dimensions of the two vessels are as follows: painted olla, height 34 cm. (13⅜ inches), mean diameter 32.5 cm. (12¾ inches); plain olla, height 32 cm. (12⅝ inches), mean diameter 32 cm. In both specimens the walls are slightly thickened at the brim, those of the painted vessel measuring about 4 mm. and those of the plain vessel about 4.5 to 5 mm. in thickness. Below the brim the walls are thinned to about 3 mm., as is shown in the fractured neck of the painted specimen. The capacity of these Seri vessels in proportion to their weight, compared with that of typical examples of ware produced by other desert peoples, is shown in the accompanying table.

Comparison of the mean ratios indicates that the Seri ware is almost exactly twice as economical as that of the Pueblos—i. e., that its capacity is twice as great in proportion to the weight of the vessel; and that

[1] The preciousness of water in this hard province was impressed in the 1895 expedition, during which the cost of the commodity, reckoned on the basis of the time and labor involved in obtaining it, was estimated at $10 or $12 per gallon, or about the wholesale price of the finest champagnes.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

even the ware of the wide-wandering Papago is more extravagant than that of the Seri in the ratio of 100 to 54. It is noteworthy, too, that the typical Seri ware is much more uniform than that of the other tribes; the various specimens seen in use at Costa Rica, and nearly entire in various parts of Seriland, were closely similar in form and nearly alike in dimensions; while the innumerable smaller fragments scattered over Seriland and the neighboring "despoblado" or buried amid the shells of Punta Antigualla correspond precisely in thickness, in curvature, in material, and in finish with the ware observed in use.

Neither the manufacture of the ware nor the sources of material have been observed by Cancasians. Examination of the specimens indicates that the material is a fine and somewhat micaceous clay, apparently an adobe derived from granitoid rocks; and such material might be

Ratio of capacity to weight among Indian ollas[1]

	Capacity	Weight	Ratio	Mean ratio
	Liters	*Kilograms*		
Seri:				
Plain	13.14	1.91	0.136	0.127
Painted	13.61	2.30	.147	
Papago:				
No. 1	17.03	4.08	.239	.233
No. 2	8.51	2.38	.279	
Sia	15.14	3.82	.252	.271
Zuñi	12.30	3.18	.259	
Acoma	13.61	4.31	.276	
Hopi	13.72	4.06	.295	

obtained in various parts of Seriland. The structure of the ware reveals no trace of coiling or other building process, nor does the texture clearly attest the beating process employed by the Papago potters; but there is a well-defined lamellar structure, and the surfaces (especially inner) are striated circumferentially or spirally in such manner as to suggest a process of rubbing under considerable pressure. All the specimens are so asymmetric as to indicate the absence of mechanical devices approaching the potter's wheel, while the necks are of such size as to admit the hand and forearm of an adult female but not of a warrior. Some suggestion of the manufacturing process is afforded by miniature fetishistic and mortuary specimens, such as those depicted in figures 17 and 18, and the larger specimens shown in figure 39, which were evidently shaped from lumps of suitable clay first hollowed and then gradually expanded by manipulation with the fingers, with little if any aid from implements of any sort. On putting the various indi-

[1] In this table the ratio is expressed by the weight in kilograms for each liter in capacity. The Papago and Pueblo specimens were selected from typical material in the National Museum and at random, save that in the Pueblo ollas choice was made of specimens corresponding approximately in size with those of the Seri.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

On putting the indi-

323 [462] cations together it would seem probable that the ware is made by the women, and that each piece is shaped from a lump of tempered and well-kneaded clay of suitable size, first hollowed and rudely shaped over one hand, and gradually expanded by spiral rubbing, kneading, and pressure between the hands of the maker. The burning is incomplete and variable, suggesting a little outdoor fire in a shallow pit adapted to a single vessel. The ware is without glaze or slip or other surficial treatment save that the lamellar texture is best developed toward the surfaces; hence it is so porous that the filled vessel is moist even in the sun.

482 [462] Ordinarily women are the water-bearers, each carrying an olla balanced on the head with the aid of a slightly elastic annular cushion, usually fashioned of yucca fiber (plate XXXII and figure 15), though in some cases two ollas are slung in nets at the ends of a yoke (figure 16) after the Chinese coolie fashion (this device being apparently accultural).

FIG. 15—Seri olla ring.

● 415 The function of the conventional Seri olla is exclusively that of a canteen or water-carrying vessel, and its form is suited to no other use; while its lines, like its thinness of wall, are adapted to the stresses of internal and external pressure in such wise as to give maximum strength with minimum weight. It is by reason of this remarkably delicate adaptation of materials to purposes that the plain olla figured in plate XXXIII, weighing an ounce or two more than 10 pounds in dry air, holds and safely carries three and one-third times its weight of water. When such ollas are broken, the larger pieces may be used as cups or

FIG. 16—Water-bearer's yoke.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

dishes, or even as kettles, in the rare culinary operations of the tribe (as shown in plate X); but the entire vessels appear to be religiously devoted to their primary purpose. 415

While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms. The most conspicuous of these is a smaller, thicker-walled, and larger-necked type, of which three or four examples were observed; two of these were in use (one is represented lying at the left of the jacal in plate X), and another was found cracked and abandoned on the desert east of Playa Noriega. The vessels of this type are used primarily as kettles and only incidentally as canteens. In both form and function they suggest accultural origin; but the ware is much like that of the conventional type. Another erratic type takes the form of a deep dish or shallow bowl, of rather thick walls and clumsy form, which may be accultural; a single example was observed in use (it is shown in plate XIV). There are also mortuary forms, including a miniature olla (figure 39) and bowl (figure 41), and such still smaller examples as those illustrated in figures 17 and 18. In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and strongly caricatured female figure some 2 inches high, with exaggerated breasts and pudenda. Analogy with neighboring tribes suggests that the very small vessels and the figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time and from the same material as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but practically as a "draw-piece" for testing the progress of the firing. 323 532 [171] [415]

FIG. 17.—Symbolic mortuary olla.

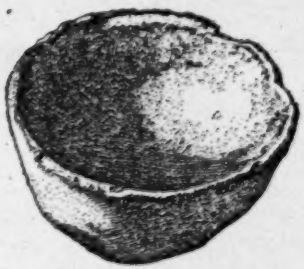

FIG. 18.—Symbolic mortuary dish.

By far the most numerous of the utensils connected with potable water are drinking-cups and small bowls or dishes; but these are merely molluscan shells of convenient size, picked up alongshore, used once or oftener, and either discarded or carried habitually without other treatment than the natural wear of use (an example is illustrated in figure 19). Larger bowls or trays are improvised from entire carapaces of the tortoise (probably *Gopherus agassizii*), which are carried considerable distances; and still larger emergency water-vessels consist of carapaces of the green turtle (*Chelonia agas-* 237 415

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

sizii), laid inverted in the jacales; these shells also being used in natural condition. No wrought shells, molluscan or chelonian, were observed in use or found either in the jacales or on the hundreds of abandoned sites; but the vicinage of the rancherias, the abandoned camps and house sites, and the more frequented paths are bestrewn with slightly worn shells, evidently used for a time and then lost or discarded. The relative abundance of the fictile ware and this natural shell ware in actual use is about 1:3; i. e., each adult female usually possesses a single olla of the conventional type, and there may be one or two extra ollas and two or three clay dishes in each band or clan, while each matron or marriageable maid is usually supplied with two to four shell-cups and each little girl with one or two; and there are twice as many carapace trays as clay dishes. The disproportion of

FIG. 13—Shell-cup.

pottery and shell about the abandoned sites is naturally much greater; for the former is the most highly prized industrial possession of the women, while the shells are easily gained and lightly lost.

With respect to solid food the Seri may be deemed omniverous though their adjustment to habitat is such that they are practically carniverous.

The most conspicuous single article in the dietary of the tribe is the local green turtle. This chelonian is remarkably abundant throughout Gulf of California; but its optimum habitat and breeding-place would appear to be El Infiernillo, whose sandy beaches are probably better adapted to egg laying and hatching than any other part of the coast. Here it has been followed by the Seri; perhaps half of the aggregate life of the tribe is spent within easy reach of its feeding and breeding grounds, and tribesman and turtle have entered into an inimical com-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

137 chiefly in the form of wounded and dwarfed specimens, seems to indicate that its original range comprised all Seriland; while its dearth suggests destruction nearly to the verge of extinction by improvident generations better armed with their hupfs and harpoons and shell-cups than the subhuman beasts against whom the plant is so well protected.

285 415 Aside from the universally used hupf and ahst (which may be regarded as differentiated implements or tools), the only special device used in connection with vegetal food is the basket, or, rather, basketry tray (illustrated in figure 24). This ware is of the widespread coil type so characteristic of southwestern tribes. The coil is a wisp of stems and splints of a fibrous yet spongy shrub, apparently torote; and the woof consists of paloblanco (?) splints deftly intertwined by aid of an awl. The construction is fairly neat and remarkably uniform: the

FIG. 24—Seri basket.

coiled wisps vary somewhat in size, both intentionally and inadvertently, ranging from an average of three-eighths of an inch toward the bottoms of the larger specimens to half that diameter in the smaller specimens and toward the margins of the larger. The initial coil starts in an indefinite knot, rather than a button, at the center; and the spiral is continuous throughout, the final coil being quite deftly worked out to a single splint smoothly stitched to the next lower spiral with the woof splints. The ware is practically water-tight, remarkably strong and resilient, and quite durable in the dry climate of Seriland. Ordinarily the basket is abandoned when the bottom decays or breaks, but an ancient specimen obtained on Isla Tiburon was roughly rebottomed with a patch of sealskin attached by means of sinew. The baskets are notably uniform in shape, though the size varies from 8 or 9 inches to fully 17 inches in diameter.

The most striking feature of the Seri basketry, as of the pottery, is

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

extreme lightness in proportion to capacity, a quality due to the spongy character of the torote coil and to the thinness of the splints used in the woof. The inside dimensions, weight, and dry-measure capacity (filled to the level of the brim with rice) of two typical specimens approaching extremes in size are indicated in the accompanying table. As noted elsewhere, the ware is absolutely without decorative devices in weave, paint, or form; it is baldly utilitarian, a model of economy in material and in the balance between structure and function, approaching in this respect the thin-walled canteen-olla, the graceful balsa, and the light but effective harpoon. The structural correspondence of the ware to a widespread type and its limited use among the tribe suggest an accultural origin for the Seri basketry; but the delicate adjustment of means to ends in the manufacture and the strictly local character of the material quite as strongly suggest an indigenous development.

285 415 [531] [174]

Museum No.	Diameter	Depth	Weight	Capacity
174328....	38 cm.(15 in.)	9.5 cm.(3¾ in.)	482 g.(17 oz.)	6.25 l.(6.6 qt.)
174329a ..	23 cm.(9 in.)	5.0 cm.(2 in.)	142 g.(5 oz.)	1 l.(1.06 qt.)

It is impossible to portray justly the food habits of the Seri without some reference to a systematic scatophagy, which seems to possess fiducial as well as economic features. In its simplest aspect this custom is connected with the tuna harvests; the fruits are eaten in enormous quantity, and are imperfectly digested, the hard-coated seeds especially passing through the system unchanged; the feces containing these seeds are preserved with some care, and after the harvest is passed the hoard (desiccated, of course, in the dry climate) is ground between hupf and ahst, and winnowed in baskets precisely as are the mesquite beans; and the product is then eaten either dry or in the form of atole like the mesquite meal. In superficial view this food factor is the precise homologue of the "second harvest" of the California Indians as described by Clavigero, Burgert,[1] and others; but it gains importance, among

262 514 [251] [252] [171]

[1] An Account of the Aboriginal Inhabitants of the Californian Peninsula, as given by Jacob Burgert, a German Jesuit missionary. . . . Translated and arranged for the Smithsonian Institution by Charles Rau; Ann. Rep. Smithsonian Inst. for 1863, pp. 352-388. Burgert's account of foods (pp. 362-367) is so apposite as to be worthy of quotation nearly entire:

"Notwithstanding the barrenness of the country, a Californian hardly ever dies of hunger, except, perhaps now and then an individual that falls sick in the wilderness and at a great distance from the mission, for those who are in good health trouble themselves very little about such patients, even if these should happen to be their husbands, wives, or other relations; and a little child that has lost its mother or both parents is also occasionally in danger of starving to death, because in some instances no one will take charge of it, the father being sometimes inhuman enough to abandon his offspring to its fate.

"The food of the Californians, as will be seen, is certainly of a mean quality, yet it keeps them in a healthy condition, and they become strong and grow old in spite of their poor diet. The only period of the year during which the Californians can satisfy their appetite without restraint is the season of the pitahayas, which ripen in the middle of June and abound for more than eight weeks. The gathering of this fruit may be considered as the harvest of the native inhabitants. They can eat as much of it as they please, and with some this food agrees so well that they become corpulent during this period; and for this reason I was sometimes unable to recognize at first sight individuals, otherwise perfectly

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

was not detected until the opportunity for personal inquiry had gone by. About the rancherias on Isla Tiburon, and especially about the extensive house-group at the base of Punta Tormenta, there are burial places marked by cairns of cobbles, or by heaps of thorny brambles where cobbles are not accessible; and most of these cairns and bramble-piles are supplemented by hoards of desiccated feces carefully stored in shells, usually of *Area* (a typical specimen is illustrated in figure 25). The hoards range from 50 to 500 shells in quantity, and there were fully a score of them at Punta Tormenta alone. About the newer rancherias, as at Rada Ballena, where there are no cemeteries, the hoards are simply piled about small clumps of shrubbery. The meaning of the association of the dietetic residua and death in the Seri mind is not wholly clear; yet the connection between the "strong food" for the warpath and the

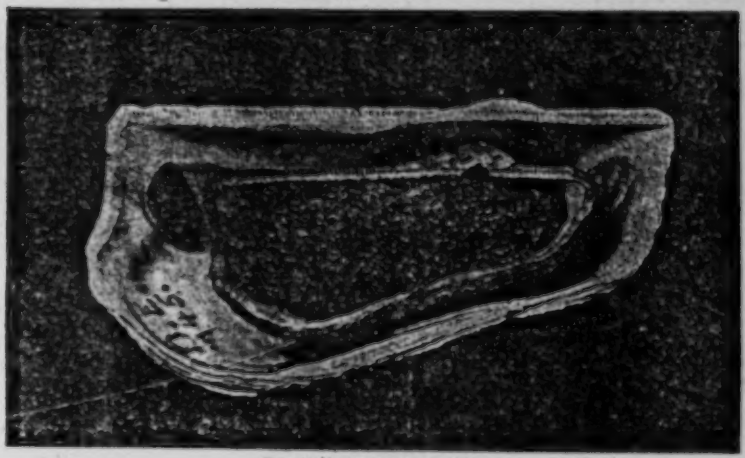

FIG. 25.—Scatophagic supplies.

mystical food for the manes in the long journey to the hereafter is close enough to give some inkling of the meaning.[1]

In recapitulating the food supplies of the Seri it is not without interest to estimate roughly the relative quantities of the several constituents consumed; and the proportions may be made the more readily comprehensible by expression in absolute terms. As a basis for the quantitative estimate, it may be assumed that the average Seri, living, as he does, a vigorous outdoor life, consuming, as he does, a diet of less average nutrition than the selected and cooked foods of higher culture, and attaining, as he does, an exceptional stature and strength, eats something more than the average ration; so that his ration of solid food may be lumped at 2.75 pounds (about 1,250 grams) daily, or 1,000

[1] Cf. Scatologic Rites of all Nations, by Captain John G. Bourke, 1891, especially chapter 14, pp. 429-468. The Seri custom, resting as it does, on an evident economic basis, tends to explain the scatophagy of the Hopi and other tribes described by Bourke.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

415

PAINTED OLLA, WITH OLLA RING

[p. 222 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

415

PLAIN OLLA

[p. 226A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

activities; i. e., in developed industries the tool is a primary factor, while in nascent industries it is but a collateral.

The tools of any primitive tribe may be defined as appliances used primarily in the production of implements and utensils, and incidentally in preparing food, making habitations, manufacturing apparel, building vehicles or vessels, etc—in short, the appliances used in producing devices for the maintenance of active life. The definition emphasizes both the dearth and the undifferentiated character of Seri tools; for the appliances used in the production of devices are exceedingly few, and are commonly employed also in food-getting or in other vital industries.

Perhaps the most conspicuous general fact in connection with Seri tools and their uses is the prevalence of natural objects employed either (1) in ways suggested by natural functions or (2) in ways determined by the convenience of users; the former grading into artificial devices shaped in similitude of natural objects and employed in ways suggested by natural functions.

Prominent among the natural objects employed in natural ways are mandibles of birds, used in piercing pelts and fabrics; fish spines and bones, also used as piercers; thorns of cacti and mimosas, used in similar ways; teeth and horns of game animals, used in rending their own tissues, and afterward in miscellaneous industrial processes; together with cane splints, used for incising. Frequently the employment of such objects is mere improvisation; yet, so far as could be ascertained through direct observation at Costa Rica, through Mashém's incomplete accounts, and through inquiries from residents on the frontier, even the improvisations are made in accordance with regular custom firmly fixed by associations—quite in the way, indeed, of primitive life generally, and of the physiologic and psychic processes from which primitive custom is so largely borrowed. With these objects may be grouped the turtle-shells and pelican-pelts used as shields against alien and animal enemies or as protectors against the elements; and the Seri sages would class with them the deer-head masks and deer-hoof rattles worn in the dance to at once symbolize and invoke strength and swiftness. One of the most striking among the artificial devices of symbolic motive is the piercer, or awl, of wood or bone, shaped in imitation of the avian mandible; yet still more significant in a vestigial way (provided the most probable inference as to genesis be valid) is the hard-wood foreshaft of arrow and harpoon, shaped and used in trenchant symbolism of the deadly tooth.

There are two conspicuous classes of natural objects employed in ways determined largely by the convenience of the users, viz, (*a*) marine shells and (*b*) beach pebbles.

The marine shells applied industrially comprise the prevailing local genera, *Cardium*, *Mactra*, *Area*, *Chama*, and others. They are used ordinarily as drinking-cups, dishes, dippers, receptacles for fats and fare-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

237 412 [415] paints, and as small utensils generally; and they are used nearly as commonly for scraping skins, severing animal and plant tissues, digging graves and waterholes, propelling balsas, and especially for scraping reeds and sticks and okatilla stems in the manufacture of arrows, harpoons, bows, balsas, and jacal-frames—indeed, the seashell is the Seri familiar, the ever-present handmate and helper, the homologue of the Anglo-Saxon Jack with his hundred word-compounds, a half-personified reflex of habitual action and thought. Ordinarily—always, so far as is known—the shells are used in the natural state, i. e., either in the condition of capture and opening for the removal of the animal, or in the condition of finding on the beach. For certain purposes the fresh and sharp-edged shell is doubtless preferable, and for others the well-worn specimen (like the paint cup illustrated in plate XXVII) is chosen; but everything indicates that the need for smoothed shells is met by selecting wave-worn specimens, and nothing indicates that the value of the appliance is deemed to be enhanced by wear of use—in fact, the abundance of abandoned shells about the rancherias and camp sites, and over all Seriland for that matter, indicates that the objects are discarded as easily as they are found along the prolific shores.

412 Next to the shells, the most abundant industrial appliances of the Seri are beach pebbles or cobbles. They are used for crushing shell and bone, for rending the skins of larger animals, for severing tendons and splintering bones, as well as for grinding or crushing seeds, uprooting canes, chopping trees and branches, driving stakes, and for the multifarious minor purposes connected with the manufacture of arrows and balsas and jacales; they are also the favorite women's weapons in warfare and the chase, and are sometimes used in similar wise by the warriors. The material for these appliances paves half the shores of Seriland, and is available in shiploads; and its use not only illustrates Seri handicraft in several significant aspects, but illumines one of the more obscure stages in the technologic development of mankind.

The cobble-stone implements of the Seri range from pebbles to bowlders, and there is a corresponding range in function from light hand-implements at one end of the series to unwieldy anvils and metates at the other end. The intermediate sizes are not infrequently utilized, and are customarily used interchangeably, the smaller of any two used in conjunction serving as the hand implement and the larger as the anvil or metate; yet there is a fairly definite clustering of the objects about two types, a larger and more stationary class, and a smaller and more portable one.

192 412 The Seri designation for the larger stone implement is that applied to rock generally, viz, *ahst* (the vowel broad, as in "father"); and it seems probable that the term is onomatopoetic, or mimetic of the sound produced in the use of the implement as a metate, and that its application to rocks generally is secondary. The designation applied to the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

764 together by okatilla stems, the shocks being sometimes nearly as high and broad as the jacales. A few of the scatophagic shells were found about the bramble-marked graves at Pozo Escalante, and a single one at Barranca Salina. In general the association of cemeteries and ran-
[768] cherias, or of graves and jacales, indicates that habitations are usually abandoned for a time when a death occurs within or near them.

[415] The most conspicuous cairn seen in Seriland was well within Tiburon. It stands on the southern side of a little rock-butte about a mile and a half east-south-east of Tinaja Anita, south of the main arroyo, and near where the trail from the tinaja bifurcates toward Arroyo Carrizal and Punta Narragansett, respectively. It is shadowed by a notably large and widespreading paloverde, and is in the form of a cone estimated at 7 feet in height and 18 or 20 feet across the base. The materials, at least on the surface, are rounded pebbles and cobbles, possibly from the adjacent arroyos, though more probably from the beaches, of which the nearest is miles away. It was not determined to be mortuary.[1]

FIG. 30—Mortuary olla.

On the death of the matron, a grave is scooped out by means of shells

[126] [1] As an indication of the conditions for observation in Seriland, this cairn is fairly typical: it was seen but once (on December 25, 1895), and the observation was limited to a few minutes by the attendant circumstances. On the evening before the party landed at Campo Navidad, with the hope of working up the coast nearly or quite to Punta Tormenta on the following day; but before morning a dowdy gale was whitening the waters of Bahia Kunkaak so fiercely as to prohibit embarkation. Meantime the supply of water—that standard commodity of arid regions—was too nearly exhausted to permit inaction; so while Mr Johnson with three guards ascended the Sierra to establish a new topographic station, the leader of the party with the remaining seven men set out in search of water. The nearest known aguaje was that of Arroyo Carrizal; but under the hypothesis that some of the better-beaten trails turning northward might lead to nearer water, one of them was taken; and after turning back from half a dozen false scents, the principal trail was followed to the well-known Tinaja Anita, 15 miles by the trail from Campo Navidad; and here the party watered. It was on the return trip that the cairn was discovered; but the party were laden with filled canteens and canvas-pans and coffee-pots, the day was well spent, and the camp more than a dozen miles distant even over the air line traversing spall-sprinkled taluses and sharp-edged rocks; moreover, the men were naturally and necessarily heavily armed and on constant guard. Accordingly even the short stay and cursory notes involved an additional mile of darkness on a trail so rough as to cut through shoe-soles and sandals and catch scants of blood to tempt coyotes to the camp site. Thus it was that the cairn was not more critically examined and is not more fully described.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

property of the deceased. Finally the pelican-pelt bedding is folded over the body, and two turtle-shells are laid over all as a kind of coffin, when the grave is carefully filled, and the ground so smoothed as to leave no mark of the burial. During subsequent hours the stones for the cairn or the cholla-joints and other brambles for the brush-heap are piled over the spot, while the scatophagic shells are added at intervals apparently for weeks or months and perhaps for years after the burial.

FIG. 41—Food for the long journey.

The mortuary food is carefully selected for appropriate qualities (i. e., for "strength" in the notion of the mourners). It comprises portions of turtle-flippers, and, if practicable, a chunk of charred plastron—the food substance especially associated with long and hard journeys—with a few fresh mollusks, and, judging from a single good example as well as from analogy, one or two scatophagic shells. The remains of a funerary feast are illustrated in figures 41 and 42, the latter being the scatophagic receptacle utilized apparently in the absence of the customary Noah's ark. It may be significant that this shell is perforated at the apex, evidently by long wave-wear before utilization, and that the accompanying olla bears marks of having been broken, then repaired, and afterward perforated, as illustrated in the photo-mechanical reproduction (figure 39); for these features perhaps express that idea of "killing" mortuary sacrifices, ostensibly to fit them to the condition of the deceased, though really (in subconscious practicality) to protect the sepulcher from predation.[1]

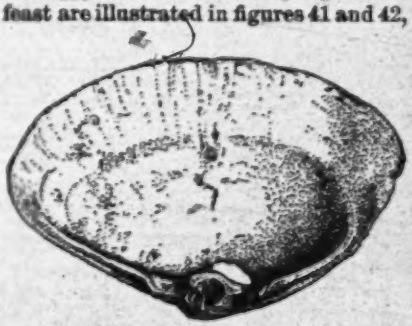

FIG. 42—Mortuary cup.

[1] "In all stages of development belief runs a close race against cupidity, and is sometimes distanced; so the sages learn that even a buried weapon may be a source of contention, which they thenceforward forestall by breaking or burning it." (Primitive Trephining in Peru; Sixteenth Ann. Rep., Bureau of American Ethnology, 1897, p. 22.)

2: Kroeber E-5 (1930)1931 NU31 Seri NU31

McGEE ON THE SERI

The pages that follow deal with McGee's well-known monograph on the Seri,[1] discussing first points on which his data are fuller or mine confirm or modify his, and then points on which I believe him to have been in error or to have misconstrued his observations. McGee spent little more time in actual contact with the Seri than I did.[2] His work impresses me as that of an extraordinarily good observer, keen in seeing significant evidence, but of uncontrolled imagination and unconscious of his preconceptions. It is only fair to state that where he founds an interpretation on slender or uncertain data, he generally indicates the fact to a careful reader.

Data and Discussion

The ratio of kilogram weight to liter capacity of water jars is given by McGee (p. 183) as follows: 2 Seri, .126-.147; 2 Papago, .239-.279; 4 modern Pueblo, .252-.295. There is no doubt that the Seri olla is unusually thin-walled. Sherds seen at a campsite near San Rafael, on the dry course of the Bacuachi, 20 or more miles from the coast, ran from 2 to 5.5 millimeters in thickness, averaging 3.8; their curvature was slight, indicating large vessels. McGee remarks (p. 184) that the purpose of nearly all Seri pottery is to hold or transport water, other uses being secondary, generally after breakage. My observations on the island confirm this.

Head loads are carried on a ring of "yucca" fiber (p. 184).

The carrying stick or yoke, with nets to hold ollas, is considered accultural by McGee (p. 184), although he mentions (p. 68) that Ugarte in 1721 saw the device in use by men, the women carrying single ollas, presumably on their heads. Nordenskiöld has recently shown the "coolie yoke" to be ancient in the area.[3] It is used today in Sinaloa and Sonora.

McGee (pp. 11, 191, 292) thought that he understood that the "Ancient of Pelicans" was the chief creative deity and brought up the islands and earth with the help of the Turtle or Shark. This

[1] W J McGee, The Seri Indians, BAE-R 17, part 1, pp. 1-128, 129*-344*, 1898. (In citations of the higher page numbers, the asterisk is omitted.)

[2] McGee (pp. 13, 98, 281) in 1894 spent "about a week" at Costa Rica west of Hermosillo where some 60 Seri were temporarily congregated, his principal informants being subchief Mashém who spoke Spanish, and Juana Maria. A Spanish-English interpreter is referred to. In 1896 the coast and Tiburon Island were visited, camps examined, but not a single Seri encountered. The vocabulary was obtained chiefly at Hermosillo from Kohuilo, an old Seri official interpreter who had left the island in childhood, never revisited it, considered himself an outlaw in Seri eyes, and had long had no dealings with them except under Mexican protection. I spent six days or parts of days with Seri, sleeping two nights on Punta San Miguel and three in the ranchería on the island opposite. Two Seri accompanied us back to Hermosillo to draw their government stipends, and were available for some supplementary questioning and revision of notes on the two following days.

[3] Comparative Ethnographical Studies, No. 9, 284, 1930.

285
291
342
415

FIG. 4. DOMESTIC SCENE IN A SERI VILLAGE

[p. 197(A)]

222 forests of giant cacti (Fig. 9) provide during this season an unlimited supply of "pitahayas" toward which the tribespeople customarily moved to accomplish the annual harvest. The fruits were readily knocked down by means of long poles and, when ripe, the spines were easily brushed off, leaving a luscious pulp as big as a fig. During the height of the season all the clans withdrew from the coast and gave their undivided attention to the collection and consumption of the cactus fruit, gorging tremendous quantities for weeks until waning supply and cloying appetite drove them back to the more severe hunt for turtle and pelican.

252 Perhaps the only germ of thriftiness in the
262 Seris is shown by a peculiar custom with
514 respect to the pitahayas. The fruits, eaten in such enormous quantity, were imperfectly digested, the hard-coated seeds particularly passing through the body unchanged. Using
[415] large seashells, the feces containing these
[251] seeds were collected and preserved with some care. Thus, when the harvest of fresh fruits was over, there remained a hoard of these dry, nutritious discharges which were ground on the stone adst, winnowed in a shallow basket and made into a meal to be eaten, either dry, as a watery atole, or mixed with turtle grease to form a thick paste.

614 Although the Seri's omnipresent problems of food-getting and of personal subsistence have been of particular interest, the lost social customs of the tribe deserve a moment's attention. Before the death of all
[161] but a few of the 2,000–3,000 Seris at the hands of invading Spaniard and Mexican, the tribe consisted of a number of conspicuous maternal clans, each of which was presided over by a zoic tutelary such as the Pelican, the Turtle, the Rattlesnake, or the Badger. The totemic symbols denoting the
302 various beast-gods and incidentally indicat-
386 ing the blood-carriers of clans dedicated to
614 them, consisted of elaborate designs painted upon the face (Fig. 10). In accord with their savagery in which the social organization was based on blood kinship reckoned in the female line, under ordinary circumstances, the faces only of the females were painted. Colored minerals pounded to powder afforded the pigments for the paint-

[p. 201(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

their minds and to live among them without undue fear of losing his life. Through the kindness of Señor Thomson the senior author succeeded in making himself a friend of the Seri and, enlarging upon this friendship through long periods of living and traveling among them, has acquired an intimate knowledge of these strange people.

In 1922 the fishing industry of the Gulf of California was not yet well developed, and it was to be ten years before the village of Kino should appear on the maps of the Sonora coast. The Seris were still isolated in their desert domain and their numbers, then about 250, were maintaining themselves out of reach of the infectious diseases of the white man. The clan life had disappeared, and the people lived as a single tribe with their old chief, Juan Tomas, 90 years old at that time

FIG. 15. MOVING DAY AMONG THE SERIS
THESE BURDENS, BORNE FOR MANY MILES OVER ROCKS, THROUGH CACTUS AND DEEP SAND, CONTAIN UTENSILS FOR HOUSEKEEPING WHEREVER THE SERIS MAY STOP.

178 of sea lion oil and powdered cactus skeleton,
396 was launched. It was the largest craft they had ever possessed and came to be called the "battleship," for its size.

After having established firm friendship
114 with the tribe in 1922, it was possible two years later to carry out an extensive plan to
221 learn the habits of the Seris by living among them, sharing their comradeship along with their privations. At this time they still had no homes that could even be called semi-permanent. Moving here and there in response to fluctuations of their precarious food supply, household things were not accumulated, and life continued to be reduced to its very simplest elements and absolute necessities. Baskets made of fiber from the torote tree, some tin cooking and water vessels (the handmade olla was seldom any
● [415] longer made), some patched and filthy rags which served as blankets to the fortunate few, constituted the family possessions (Fig. 15). Starved, bony family dogs were abun-
231 dant, as always, every Indian having one or two (Fig. 16). Each day they could be seen gnawing on some old fish head long since

[p. 264 (B)]
[Text continues on p. 265(A)]

3:Davis & Dawson E-5 (1922-1940) 1945
NU31 Seri NU31

[342]
[415]
[732]

FIG. 17. SERI BLIND MAN
BEING LED BY A BOY. NOTE THE CRUDE SHELTER OF POLES AND BRUSH SERVING AS AN AIRY DWELLING.

231 destitute of nourishment, tough and strong as rawhide; but hope springs eternal in an Indian dog's stomach, and again and again he will search out and mouth the same old pelican bone or fish head, discouraged never. The dogs, beside keeping the camp clean, lick all the cooking utensils when they are not tended, and also are allowed to lick clean the infants after they have performed their natural defecations. A Seri girl was seen placing [312] a small can of water for a dog to drink from, afterward drinking some of the remainder herself and then pouring the rest back into the family five-gallon can.

732 Although the conditions of existence for
734 the Seris had from time immemorial been too precarious to permit of anyone living who was unable by physical disability to hunt or fish to get his meat, there were two or three men, blind or nearly so, whose wives got an uncertain living for them by the hardest struggle (Fig. 17). If a Seri, however, became ill of a disease which the tribe feared, he was often taken into the desert and left with a little food and water, either to get well and return or to perish.

[P. 265(A)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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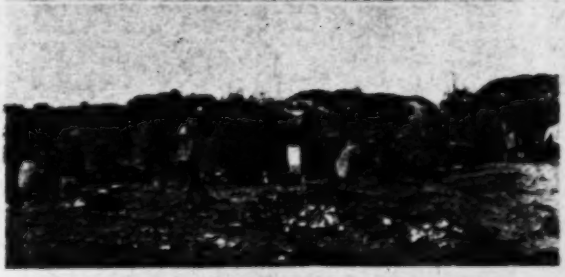
1. A basket of cactus meal.

342



2. A Seri village on Tiburon Island. Note the large shells of the sea turtle that serves as food.

285
S31
S46

3. Making the Seri basket. House is constructed of ocotillo branches and brush.

[p. 135]

237 On the other hand, the hides of all of these three animals had been traded off to the Mexicans, [439] but this again was now discarded. This would [182] merely indicate the fluctuation of collapse of the demand from the outside rather than any intrinsic change in the Seri values.

Incidental use of the horns of the bighorn had been denied by all of the younger informants although admitted by Miguel Barnett. However, as I observed, the horns of this sheep are sometimes [415] used as drinking cups. Several of them were [181] lying around in the usual disorderly way of the Seris, now and then picked up for drinking and then again discarded. But the use of them struck me as most casual.

224 411 *Hunting:* Hunting takes a variety of forms and includes a variety of weapons, from .22 caliber and .30/.30 caliber rifles to spear, stone and throwing stick. Bighorn and deer are followed on foot but without dogs, probably because without dogs they may be easier to surprise. This hunt takes place in daytime. But the peccary is hunted with both the spear and the rifle and with a pack [231] of dogs, and only by the adult men. There is an [885] emphasis on the "adult," this surely owing to the certain amount of danger connected with the chase of the peccaries. The weapons of the chase dwindle to the throwing stick or a stone when it comes to the jackrabbit. Badgers, I was told, are also killed with the same weapons. But formerly, the informants said, bow and arrow was much instrumental in hunting the smaller beasts.

* 825 Other animals, according to the Seris, are not [224] hunted now, nor had they been in the past. Justification for this ranged from the usual "because it isn't done" to the more specific reasons. The skunk is "neither hunted nor eaten because it [225] stinks." The whale is considered "too big to kill" while the killer whale is "too fierce." The harmless *tonita* (dolphin)[1] was reported somewhat hazily as "sometimes killed" but the comments were inconclusive and were denied by other informants.

[224] Two other species had been reported as hunted in the past but not at the present time. The Ringtail cat was supposedly hunted with the slings [225] while the sea lion was hunted down "with a rifle or rock but not with the harpoon because of its great strength, it would break the harpoon." This, however, was "perhaps 25 years ago." Why the sea lion is no longer pursued is uncertain, unless there is again a lack of demand from the outside while the Serian economy is so much centered on fishing.

231 *Pets:* How many species of animals are kept as pets on and off is difficult to say. Like most hunting and gathering groups the Seris are fond of pets but their interest in them depends entirely on an accidental capture. Among the wild mammals of the region there are few that could be captured and tamed easily. The badger which I mentioned already was the only mammal I saw

[237] [362] [1] I have seen bones of beached whales used for stools and also the skull of the *tonita* used as a chair. But it must be remembered that these animals got stranded on the beach. They were not deliberately hunted down.

[P. 10 B]

1/2 [i.e. - deer, bighorn and peccary - Analyst]

9:Malkin E-5 (1953-1955)1962 NUSI Seri NUSI

MOLLUSCA

VII

Species	Food		Decoration		Trade		Bait
	Prom.	Past	Prom.	Past	Prom.	Past	
Octopus bimaculatus	x	x					x
Codakia distinguenda		x					
Laviecardium elatum		x			x[1]		
Carditamera affinis	x	x					
Acmaea dalliana			x	x	x		
Crucibulum spinosum		x	x	x	x		
Chione undatella	x	x					
Chione californiensis	x	x					
Pteria peruviana	x	?	x	?	x		
Volsella capax	x	x					
Olivella dama			x	x	x		
Cypraea annettae				x[3]			
Tegula rugosa		x		x		x	
Conus regularis		x[3]		x	x	?	
Phyllonotus erythrostomus		x				x	
Turritella broderiana		x[3]			x	?	
Polinices reclusiana	x	x					
Chlamys subnudosa	x	?					
Atrina maura	x	?			x[4]		
Navicula pacifica		x					
Turbo fluctuosa	x	?			x		
Solenostira pallida			x	?	x		
Ceritium stercusmuscarum			x				
Trivia radiana			x				
Ficus ventricosus	x						
Nioche bistriunoca	x	x					

[1]Occasionally used as dip spoon

[2]Supposedly used in the past for money

[3]In the past "giants of 300-400 maybe years ago have eaten it."

[4]Only pearls

These figures show then 26 out of 37 species exploited economically in some way, that is 70%. These figures show increase over the figures I have published previously (1956) which were 21 out of 36 species and 58% respectively. The corrected figures are the result of brief additional field work in 1955.

Food

A good part of the molluscan forms are used as food. Altogether 19 species are listed as such, although out of these, only 11 were reported as being part of the diet today while the remainder only in the past. It is obvious that there has been progressive decrease in the Seris' dependence on the molluscan diet within the past few generations.

Four of the species reported as part of the Seri diet at various times had been collected from the kitchen-middens. There are: *Pteria peruviana*, *Chlamys subdudosa*, *Volsella capax*, and *Navicula pacifica*. Of these four, *Navicula* has been reported as eaten in the past "maybe 100 years ago, but not

301 worn. I have observed women wearing necklaces
+825 of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

[171]

439 d) *Trade:* Altogether 12 species had been re-
+825 ported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

[177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435] [237] [226]

que (as a result of the ecology of the coastal waters) it is gathered in huge quantities largely on the shores of Tiburon where it is said to occur in great numbers. This animal is gathered in large bulk in 5 gallon gasoline cans and then sold either as finished necklaces at the rate of five pesos each, or as bulk, by the liters, with 20 liters for each gasoline can. There is a steady market for these shells.

e) *Bait:* Only the octopus has been reported as used for fish bait for the *pinta*, *baya* and *pescara*, and I have seen it used in that manner. But it is certain that on occasion the Seri will use also for bait the flesh of some of the shelled smaller molluscs, especially when they wish to capture live fishlets for bait.

Hunting

Collecting of molluscs is almost invariably a job of adult women and of the children of both sexes who at low tides scavenge the exposed mud flats and gather or dig out various marine animals. Some are collected on the surface only. Among those that must be excavated are the octopus and *Nioche* which hide in burrows or mud, respectively. A large shell is usually used as a tool to pry the *Nioche* out.

Taxonomy

Molluscs on the whole are recognized as one group of animals. However, this does not include the octopus and the chitons which are considered as different sort of creatures. Some sort of feeble association between the *Pelecypods* and the *Gastropods* is recognized and various species of both are placed together. I noticed a tendency to consider some of the *Gastropods*, the limpets and *Crepidula* for example, as supposedly having two valves while in fact they are both univalves. The explanation offered for this was "it lost one side," meaning one valve.

Although *Chitons* spend most of their time motionless attached to rocks they are both considered animals. The motions of these animals may not have been observed by the adult, but the Indians, young boys especially, certainly noticed the changed positions after a period of time.

In some instances the Seris observed quite small differences between animals—recognizing them as different species. In the *Neritina* two different forms were correctly identified as representative of the same species, although they differed considerably in size and color. On the other hand *Columbella* and *Solenostira* had been given the same Seri name palémex[s] but were recognized as different kinds of animals.

Sexing

A distinct tendency to consider the molluscan males larger than the females emerges readily from the Seri answers. This can be shown in the table below:

[P. 40 A]

123 handed to show their friendliness.

142 291 123 [302] [411] One was a young man with rather pleasant features, his braided hair hanging below his shoulders. His name was Antonio Herrera. The other was a wild-looking specimen called Ramon Blanco. His hair was a tangled mat with a short braid behind, suspicious black piercing eyes, long sparse moustache and chin-beard hiding a broad cruel mouth. He wore the remnants of an old sweater, a short dirty kilt, or skirt, nearly to his knees, a belt full of cartridges, mostly empty, and a long knife in a rawhide scabbard.

123 [745] [291] The young man had been baptized and given a name by Roberto, who had acted as godfather or *patrona*, many years ago. He wore a hat, jacket, and pants of blue denim, and *guaraches*, or sandals of rawhide.

We shook hands all around and then they called and halloed in the brush and soon three women and a lot of children, wild and half-clothed, filed into camp. The women were tall, gaunt, unkempt, ragged and barefooted, paying us not the slightest notice. They were bearing on their heads large baskets filled with all their earthly possessions---cooking ollas, scraps of cloth, pieces of turtle meat, bone brads, hair brushes, and odds and ends. They carried, also, an infant or two wrapped in odd bits of rags. Several gaunt dogs followed in their wake.

342 [512] [361] In all, three families came trailing in, removed their household equipment from their heads and resumed their interrupted and primitive housekeeping. Each family occupied its apartment in the row of brush shelters, separated from each other only by brush partitions with a total lack of privacy. These shelters, always open to the sea, serve as shade from the fierce rays of the sun, and also as windbreaks, but are no protection from infrequent rains. They are occupied only for a brief period and then their nomadic tenants move on to fresh *cahuaas*, or sea turtle range.

123 [142] Soon, a third man arrived while we were near the huts, Manuel Encina. He was a man of sixty-five, gray hair and mustache, seamed features, and not evil looking. He was out of breath. He had gone for water to the same water hole where we had been yesterday, struck our tracks, had left his water cans and hurried back to warn his people. He was greatly relieved to find friends.

Since he had gone for water, inquiry revealed there had been no water in camp for two days, and six adults and one girl of thirteen and six children were thirsty. We gladly gave them one of our five-gallon cans of water and they were very grateful. They had caught a sea turtle the day before and gave us some turtle steaks which looked like beef or mutton.

312 402 123 As the camp was without water and we were running short, the young man and Encina offered to get some. Each took a *palanca*, or short shoulder pole with knotched ends, fitted empty five-gallon cans in

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142 One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[28] perfect health. He was almost naked. His hair was done in a pigtail
[85] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[25] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[82] tree, and a piece of pine about sixteen inches long; terminating in a
[28] hollow where a single peg was fitted. The one string was twisted deer
[23] sinew, and the bridge was a small round clam shell at the far end. The
[53] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[12] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[34] Each family was in their hut, which afforded very slight shelter
[36] as they were only partially roofed over and the sides were broken
[35] down in places. The huts were all adjoining and each had a little
[36] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

123 [282] It was a beautiful morning in early May, and the water was still as a pond, reflecting all the sunrise tints like a mirror. After a breakfast of clams and broth, bread and sand and bronco tea, we made a big smoke and were answered by a similar smoke two miles off, so we knew our friends were on the way.

123 482 [415] In one hour they began trailing in, the women each with a load on her head, walking graceful and erect. On one head was an inverted turtle shell containing nearly all the family belongings done up in rags. On the top was the most precious belonging of all---the rifle. The man carried two or three ollas and other things on a shoulder stick. Everything necessary for their home was carried on their heads.

123 Soon the Indian Blanco was seen paddling in his *balsa*; he also had a load and had paddled all the way from Ironwood camp against wind and sometimes tide. As they were all very thirsty we gave them water around. They immediately went to the shore as it was low tide, and began gathering small oysters from the rocks. Soon each woman returned with a half bushel of them on her head.

About three o'clock and for an hour or so thereafter, Antonio Herrera, the Chief's son Chico, the old Chief Juan Tomas, two other men and one woman, came drifting into camp with their dogs. Each one was loaded with things. They were a pretty wild looking bunch. There was very little food and little water for so many.

648 731 The Chief said that a day or two before, some of his men had a fight with some sailors (Mexicans) on the Island of San Estevan four or five miles off the south west corner of Tiburon. Nobody was killed, but the two boats, the wealth of the Island, had drifted away and were lost, leaving eight men marooned on the Island. They had gone there to gather *sescal* to make drink to celebrate a wedding to come off soon. Three men were five days without water. They sent up frantic smoke signals every day. At last they were seen, and help went for them in the only remaining boat on the Island. They were rescued.

648 484 123 The Chief and his men and women, with us, are going to Hermosillo ninety miles afoot with all their belongings to ask the Government for food and help.

142 [622] The Chief looks to be seventy years old, a grim dark-skinned individual with a thin fringe of hair on his upper lip, broad nose, wide nostrils, small black eyes. He is well-built and erect. None of these that I have seen so far have any fat. They are lean and sinewy. [302] [291] The young men are of large build, high cheek bones, some with hair on their lips, their long black hair braided; sometimes with a strand of red worsted. All were either barefooted or wore sandals. I saw one pair of sandals made out of turtle hide; another of burro hide.

648 123 When the Chief arrived, the sail of a vessel was seen over the beach. Bob recognized it as belonging to a launch of a Yaqui Indian

[text continues on p. 180]

123 was black. He then ground it in the frying pan by rolling it with a tin can. When made, the coffee was black and bitter, but they were used to it that way.

At three thirty in the morning we were up from our sand beds and drank coffee. At four we pushed off, towing our *balsa* on which we lashed our turtle shells, antlers and other things. Our boat rode the waves like a duck.

As we glided by the foot of some mountains we could hear the surf break sullenly. We had the sail up but soon had to resort to the oars as the slight wind died out. Day soon began to grow light. The sea was glassy, reflecting the rosy morning tinge. There was a swell on but the waves were smooth.

136 The cormorants, in threes and fives, began flying to their feeding grounds with swift wings and necks outstretched. Then a few Pelicans drifted idly by on lazy wings. A school of sardines fretted the water near us, chased by a hungry fish from its depths. A few porpoises rose and dived, rose and dived, rose and dived, time after time. At one time eight of them came within twenty feet of us and one dived right under our bow, bouncing the boat up and down.

133 Soon we were passing some red volcanic hills, with caves and blow
123 holes in the cliff and sea caves below, in which the sea roared. Giant cactus secured a precarious footing in the crannies of the cliffs. Then a long beach, then *Cerro Prieto*, another red cliff descending to the sea, penetrated with numerous caves and roosting places for cormorants.

123 As we neared Alcatraz *(Pelican)* Island, we saw a fishing boat in the distance. The wind had freshened and was ahead and the waves seemed almost to come in board, but the hollowed tree arose and rarely shipped any water. A boat put off from the fishing boat and was rowed to shore, and as we came up we hailed the crew and grounded our own boat. They had seen us from Alcatraz Hill, and seeing the balsa thought the Seri Indians had stolen a fishing boat and were towing their own boat. Each man had a belt of cartridges and if the Seris had been there instead of us they were going to kill them. Bob knew them from Guaymas.

We pushed off from shore again, and after rowing a half or three quarters of a mile further we beached our boats, cooked dinner and waited for our auto truck. Our provisions were almost gone. We had only enough for one meal left. No meat at all. Water was almost gone. None other for miles.

415 One of the cherished vessels used by the Seris is an agate chamber
264 pot. It is black from much use. When I saw it, it contained a green
262 slimy mess made from meal of seaweed seeds and the green fat or oil of the turtle. The Seris stick their fingers into the pot and then lick them off. If any is left the dog licks out the pot. No vessel is ever washed; it is licked clean.

000 ever washed; it is licked clean.

• 415 197 One time a bunch of Seris camped near a ranch and spied a white porcelain chamber pot sunning itself. They immediately secured it and began cooking in it, without washing it first. The rancher saw them and told them that it was dirty and told them not to cook in it. They said they would clean it up after they got through and leave it as it was before they finished with it. When they come to Hermosillo they get pots from heaps of city refuse and carry them back as prizes to the Island.

123 501 We made smokes to attract attention, but all to no purpose, until about three o'clock the car appeared. It could not come close to the beach as the sand was too soft, so we had to pack everything two hundred yards in soft sand. The *balsa* was very heavy and some distance away. It also had some things tied on it, so Bob pulled off his pants and we pushed it into the surf. Bob first stood up, but it rocked so he got on his knees and pushed out with a pole and got it headed to the rollers, after which it rode easier. He then lost his pole, and in struggling to recover it the *balsa* rolled over with him and dumped him in the surf, but he grabbed the side and rolled it right again. He could then touch bottom, so he came in through the surf with it and we dragged it up and unloaded three turtle shells and a few other things. There were four of us and we put oars under it and gradually lifted and carried it to the truck.

It must have weighed six hundred or seven hundred pounds, a good part of which was water. I must say I was glad to see it started on its long land-journey.

123 The Indian messenger had arrived with my note which brought the truck. Bob, Luis and the Mexican took the boat and tried to go into the place where they hid it, but it was low tide and the boat could not enter, so they beached it and walked to Agua Sarco where we had preceded them by two or three hours. We had, over the last of our grub, a little rice and beans. As many doves were flying about the water, I shot fifteen or twenty. One of my shots brought down seven doves.

439 123 Before night all the Seris were camped near us, and when Bob came, Louis had brought all our trade stuff, so I began bartering right away.

As all were hungry we gave each man and woman three cups of flour, and three pieces of *panoche*, cakes of coarse brown sugar. They were wild for this, so when they had finished they were well disposed.

On the Island I had been called a cheerful liar for promising things, but now it was different. Three new butcher knives, all bright and shiny, I traded for three rusty homemade affairs. Two were made of barrel hoops and one from the piece of a shovel. This was a way-up knife. For the violin I traded a harmonica, and for three carved

(text continues on p. 187)

439 little gods I traded some muslin, a harmonica and some *panoche*. For
123 native hair brushes, I traded three fine-tooth combs for catching *piojos*, or lice, easier. I gave each woman a little round mirror and they were greatly pleased.

To the old Chief I presented a good pocket knife and a mirror. For the bow I traded a spark lighter. By striking the edge of a small wheel with milled edge it strikes a spark from a small flint and lights a wick.

123 We asked for a dance, and the Seris, using the bow and striking
535 sticks for music, the slender girl jumped up and down on a flat piece
[534] of tin which served, instead, of a turtle shell and also served for
[252] baking flour cakes upon also. A while before, Louis had seen a woman
[415] wash her head and that of a child in the chamber pot, empty the water and then cook in it.

After the girl had danced a while on the tin, old Manual Encina pushed her away and hopped on himself and did the double-shuffle for half an hour, after which we left for our camp.

197 The language of the Seris is the most difficult and peculiar I
194 have ever heard. It is spoken deep in the throat with the mouth open and sounds like no other language I have ever heard except that there are some sounds like Papago.

439 Even before breakfast of the next day we were still trading with
123 the Indians, and in an hour or so I possessed nearly everything they had except their rags. They seemed happy and contented and postponed their trip to Hermosillo. I left some stuff with Louis Thomson to be traded later for bows and arrows, Pelican skin dresses and baby cradles.

We then arranged our loads, said *Adios* to the Seris, and left for Hermosillo, where we arrived without accident about six-thirty p.m. The sun was very hot and the road heavy and the sun glaring, and we were all very tired when we reached town. I stored my stuff with Mr. Marks at Hotel Cohen, and will crate it before leaving for Yaqui River.

123 Before leaving the Seri Chief I told him that whenever he saw
202 this sign---Circle Bar D and left hand below it, it was me---their friend, and not to shoot at me. He said he would tell all the Seris, and I left him my card with the same sign on it. When will I see him again!

10: Davis E-5 (1922-ca. 1939) 1965 NU31 Seri NU31

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Seri Indians at home

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Seri Indians preparing their meal

123 relief and contentment rose, and everybody smiled. This concoction I placed on the fire while the Indian stirred with a long stick. It took half an hour to cook into a thick sticky paste, gummy white.

[915] Meanwhile, the women vanished and returned with various vessels: greasy baskets, a black chamber pot, frying pans, ollas, stew pots, shells, any old thing---even a cuspidor. When ready, the Indians dipped the sticky mess out with a cup into the various vessels and the women and children licked it up. Some of the children covered the back of a large clam shell with the paste and then licked it off, repeating this until it was gone. Most of the people hooked their fingers into it and licked them off time and again. Any drip on the outside was carefully licked off that four gallons of goo. I do not think one single drop was lost.

126 123 As one little girl was carrying away a clam shell of paste I secured her photograph. It was a sight not soon to be forgotten, to watch these little ones dip in their fingers, mostly two, sometimes three fingers and contentedly lick them off.

Wishing to secure a photo of the Indians in Pelican skin kilts, Roberto induced Chico Romero to strip and wrap a kilt of Pelican skins around his waist. He did this and Roberto secured a good photograph. For this service, Chico demanded three oranges which he gave to his children.

By coaxing and wheedling and joking, Roberto finally persuaded a young woman to put on the Pelican kilt, and she gradually pulled off her shirt, or waist, or whatever name it goes by, and laughingly permitted it. As her brown shoulders and breasts were exposed she covered them with her arms and hands while I took the photo. I gave her some blue powder to decorate herself and a little round mirror.

372 Chico Romero made a fire drill out of a piece of dry driftwood from a cottonwood tree, and then made a fire by turning the stick between his hands. After three or four minutes the fine dust became punk and turned into a live coal. This he carefully put in some dry grass and by holding it up in the wind it was fanned into a flame. The price of this was a red bandanna.

372 773 825 The legend of Fire was told to me later by the campfire. The Seris' god sent down a fly to Seriland to show the Indians how to make fire. The fly was pointed out to me one day. It was a trifle larger than a house fly with a body of shining green and blue.

"Now," they said to me, "notice when it lands. Did you not see it take its two hands, rub them over its head and then rub them together a few times?". . ."Each time it settles it rubs its hands together, and our Indians noticed this and in this way we were taught by this little fly how to make fire by rubbing a stick between our two hands, back and forth. One fly came to earth and found something dead and he rubbed a stick between his hands and made a smoke signal

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

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Fig. 1. Crushing the root bark of zkoktz (*Franseria dumosa*), to a pulp. Note the pieces of root in the left foreground, the little pieces of mókni ózxW sap (*Guaiacum coulteri*) in the center foreground, and the chunks of mineral in the right foreground.

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Fig. 2. The first or brighter batch of blue pigment, ?antezj kóll.

12: Moser L-5 (no date) 1964
(ca. 1960) NU31 Seri NU31

To use the clay as paint, a bit of water is placed on a stone and the clay is rubbed into it to make a paste. It is then applied to the face (Fig. 4). It spreads smoothly and adheres firmly to the skin. The blue was formerly used for decorating pottery, clay figurines, headdresses, fetishes, arrows, wrist guards, and cane gaming sticks, as well as for face painting. In curing the sick, the shaman sometimes used the blue for painting crosses on the patient's chest. Also, women made necklaces using beads formed from the blue clay.

FIG. 4. Painting the face with the finished pigment.